UNIVERSITI TEKNOLOGI PETRONAS

FINAL EXAMINATION
MAY 2024 SEMESTER

COURSE : **TFB2103 - IT AUDIT**

DATE : **31 JULY 2024 (WEDNESDAY)**

TIME : **2:30 PM - 5:30 PM (3 HOURS)**

INSTRUCTIONS TO CANDIDATES

1. Answer **ALL** questions in the Answer Booklet.

2. Begin **EACH** answer on a new page in the Answer Booklet.

3. Indicate clearly answers that are cancelled, if any.

4. Where applicable, show clearly steps taken in arriving at the solutions and indicate **ALL** assumptions, if any.

5. **DO NOT** open this Question Booklet until instructed.

Note :

   i. There are **SIX (6)** pages in this Question Booklet including the cover page

   ii. **DOUBLE-SIDED** Question Booklet.

1. a. Assess the effectiveness of using data analytics tools in enhancing the efficiency and effectiveness of IT audit procedures.

[8 marks]

b. Each of these frameworks and standards plays a crucial role in improving organizational processes and controls, enhancing governance, managing risks, and ensuring compliance with relevant regulations and industry standards.

Define each one:

i. Committee of Sponsoring Organizations of the Treadway Commission (COSO) Framework

[3 marks]

ii. NIST Cybersecurity Framework

[3 marks]

iii. Information Technology Infrastructure Library (ITIL) Library Framework

[3 marks]

iv. Sarbanes-Oxley Act (SOX) Regulation

[3 marks]

2. a. Design an audit plan that incorporates a combination of sampling, observation, and reperformance techniques for auditing user activity and data security in a university's e-learning system.

[14 marks]

b. Given a scenario where an e-commerce platform processes thousands of transactions daily, examine how to use sampling to audit the transaction accuracy.

[6 marks]

3. a. Describe **THREE (3)** types of IT audit evidence commonly used in IT audits.

[6 marks]

b. You are an IT auditor tasked with assessing the effectiveness of access controls in an information system for a large financial institution. The organization recently implemented a new Identity and Access Management (IAM) system to centralize user access and enhance security. However, there are concerns about the adequacy of access controls and the potential for unauthorized access to sensitive financial data.

The information system contains critical financial data, including customer accounts, transaction records, and sensitive corporate information. Access to this data must be carefully controlled to prevent unauthorized disclosure, alteration, or misuse. Your objective is to evaluate the effectiveness of access controls within the information system and identify any weaknesses or vulnerabilities that could compromise the confidentiality, integrity, or availability of data.

Given the scenario, select and justify **TWO (2)** appropriate audit evidence gathering technique for assessing the effectiveness of access controls in an information system.

[8 marks]

c. Examine the consequences of relying on insufficient or inappropriate audit evidence in an IT audit.

[6 marks]

4.   a.   Explain **THREE (3)** categories of IT General Controls (ITGC) and IT Application Controls (ITAC).

[14 marks]

b.   Propose **ONE (1)** example of IT General Controls (ITGC) and IT Application Controls (ITAC) for Hospital Management System.

[6 marks]

5. a. Analyze **TWO (2)** advantages and **TWO (2)** disadvantages of automated controls versus manual controls in IT applications, using an e-commerce platform as an example.

[8 marks]

   b. Identify on how segregation of duties can be implemented in a university examination department to enhance internal controls.

[**NOTE:** Use example to enhance the explanation]

[12 marks]

- END OF PAPER -